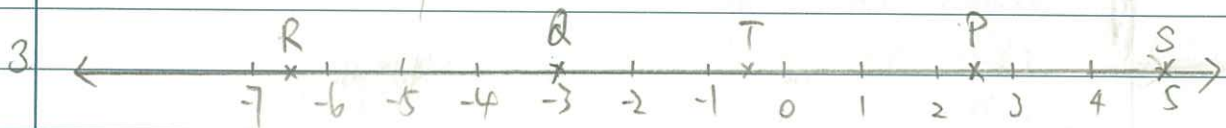


Y7. Ass 4.

1. $(-1.5, -0.5) / (-1\frac{1}{2}, -\frac{1}{2})$

2a) $(-9) - (-6) + (-7) + (+12)$
 $= -9 + 6 - 7 + 12$
 $= -16 + 18$
 $= 2$

2b) $-\frac{5}{8} + [3 - (-\frac{5}{8} - \frac{3}{8})]$
 $= -\frac{5}{8} + (3 - (-\frac{8}{8}))$
 $= -\frac{5}{8} + (3 + 1)$
 $= -\frac{5}{8} + 4$
 $= 4 - \frac{5}{8}$
 $= 3\frac{8}{8} - \frac{5}{8} = 3\frac{3}{8} / (3\frac{3}{8})$



4 $7d + 2e - 4d - 7f - 5e + 3f$
 $= 7d - 4d + 2e - 5e - 7f + 3f$
 $= 3d - 3e - 4f$

5. $y = -2x + 1$

when $x = 2$

$$y = -2x + 1$$

$$y = -2(2) + 1$$

$$y = -4 + 1$$

$$y = -3$$

$\therefore a = -3$

when $x = 5$

$$y = -2x + 1$$

$$= -10 + 1$$

$$= -9$$

$\therefore b = -9$

6. a) Perimeter = $2x + 9 - 2x + 3x + 2$
 $= 3x + 11$

b) If Perimeter $3x + 11 = 17$
 $3x = 17 - 11$
 $3x = 6$
 $x = 2$

7a) Linda's Height = $138 \text{ cm} - 1 \text{ cm}$
 $= 137 \text{ cm}$

b) David is the tallest and Gigi is the shortest
 Since David is 7cm taller than 138cm (i.e. 145cm)
 but Gigi is 3cm shorter than 138cm (i.e. 135cm)
 Vinny is 138cm
 Kevin is 140cm
 and Linda is 137cm

c) Gabriel Height is
 $147 - 138$
 $= +9 \text{ cm}$

d) Difference in Height of Gigi and Gabriel.
 $135 \text{ cm} - 147 \text{ cm}$
 $= -12 \text{ cm}$

8. $4x - y + 3 = 0$

x	(-3)	$\frac{1}{3}$	1	(-0.6)
y	-9	$(1\frac{2}{3})$	(7)	0.6

When $y = -9$
 $x = \frac{-9 - 3}{4} = \frac{-12}{4} = -3$

When $y = 0.6$
 $x = \frac{0.6 - 3}{4} = \frac{-2.4}{4} = -0.6$

When $x = -\frac{1}{3}$ $4(-\frac{1}{3}) - y + 3 = 0$
 $-\frac{4}{3} + 3 = y$
 $y = 1\frac{2}{3}$

When $x = 1$ $4(1) - y + 3 = 0$
 $4 + 3 = y$
 $y = 7$

9. $b + 143^\circ = 180^\circ$ (adj. \angle s on a st. line)

$$b = 180^\circ - 143^\circ$$

$$b = 37^\circ$$

$$\underline{c = 37^\circ} \text{ (alt. } \angle\text{s, } \parallel\text{s)}$$

$$a + b + c = 180^\circ \text{ (}\angle\text{s sum of } \Delta\text{) or } 143^\circ = 37^\circ + a \text{ (alt. } \angle\text{s, } \parallel\text{s)}$$

$$a = 180^\circ - 37^\circ - 37^\circ$$

$$a = 143^\circ - 37^\circ$$

$$a = 180^\circ - 74^\circ$$

$$a = 106^\circ$$

$$a = 106^\circ$$

10. 5, 3, 1, -1

$$T_1 = 5 \quad) -2 = 6 - 1 = 6 - (2 \times 1 - 1)$$

$$T_2 = 3 \quad) -2 = 6 - 3 = 6 - (2 \times 2 - 1)$$

$$T_3 = 1 \quad) -2 = 6 - 5 = 6 - (2 \times 3 - 1)$$

$$T_4 = -1 \quad) -2 = 6 - 7 = 6 - (2 \times 4 - 1)$$

$$T_n = \quad \quad \quad = 6 - (2n - 1) \text{ or } 6 - 2n + 1 = 7 - 2n$$

$$= -2n + 7$$

\therefore The general rule to represent the sequence

is minus 2 from the previous

And the general mathematical formulae = $7 - 2n$.

11. $\frac{x-3}{2} = \frac{3-x}{5}$

$$(x-3)5 = 2(3-x)$$

$$5x - 15 = 6 - 2x$$

$$5x + 2x = 6 + 15$$

$$7x = 21$$

$$x = 3$$

$$12. a) \quad 1.2x - 2 \times 1.2 + 2.2y - 2.2 = 27.4$$

$$1.2x - 2.4 + 2.2y - 2.2 = 27.4$$

$$1.2x + 2.2y = 27.4 + 2.4 + 2.2$$

$$1.2x + 2.2y = 32$$

$$12x + 22y = 320$$

$$6x + 11y = 160$$

$$\begin{array}{r} 2 \mid 12, 22, 320 \\ \hline 6, 11, 160 \end{array}$$

$$b) \quad \begin{array}{c|c|c} x & 23 & (12) \\ \hline y & (2) & 8 \end{array}$$

$$\text{When } x = 23$$

$$6(23) + 11y = 160$$

$$11y = 160 - 138$$

$$11y = 22$$

$$y = 2$$

$$\text{When } x = 8$$

$$6x + 11(8) = 160$$

$$6x = 160 - 88$$

$$6x = 72$$

$$x = 12$$

$$\begin{array}{r} 160 \\ -138 \\ \hline 22 \end{array}$$

$$\begin{array}{r} 160 \\ -88 \\ \hline 72 \end{array}$$

\therefore Some possible number of candies and chocolates

Are 23 candies and 2 chocolates

or 12 candies and 8 chocolates

13 Distance between $P(3a+2, 7)$, $Q(5a+7, 7)$ is 18

① If P is on the left hand side

$$5a+7 - (3a+2) = 18$$

$$5a - 3a + 7 - 2 = 18$$

$$2a = 18 - 5$$

$$2a = 13$$

$$a = \frac{13}{2}$$

$$a = 6\frac{1}{2}$$

② P

$$(5a+7, 7)$$

Q

$$(3a+2, 7)$$

① P

X

$$(3a+2, 7)$$

Q

X

$$(5a+7, 7)$$

If P is on the right hand side

$$3a+2 - (5a+7) = 18$$

$$3a+2 - 5a - 7 = 18$$

$$-2a = 18 - 2 + 7$$

$$-2a = 23$$

$$a = -\frac{23}{2} = -11\frac{1}{2}$$

14.

$$T_1 \quad 1 \quad) + 3 \quad = 1^2$$

$$T_2 \quad 4 \quad) + 5 \quad = 2^2$$

$$T_3 \quad 9 \quad) + 7 \quad = 3^2$$

$$T_4 \quad 16 \quad) + 9 \quad = 4^2$$

$$T_5 \quad 25 \quad) + 11 \quad = 5^2$$

$$\vdots$$

$$T_n \quad 700 \quad) +$$

since 700 is not a perfect square number, the biggest square number smaller than 700 is $676 = 26^2$
 \therefore This biggest square is term 26.

$$\begin{array}{r} 20 \times 400 \\ 20 \times 80 = 1600 \end{array}$$

$$\begin{array}{r} 625 \\ 28 \\ 28 \\ \hline 653 \end{array} \quad \begin{array}{r} 26 \\ 26 \\ \hline 52 \end{array}$$

[illegible]